

## KSB564A

## **Audio Frequency Power Amplifier**

- Complement to KSD471A
- Collector Current : I<sub>C</sub> = -1A
- Collector Power Dissipation : P<sub>C</sub> = 800mW
- Suffix "-C" means Center Collector (1. Emitter 2. Collector 3. Base)



## **PNP Epitaxial Silicon Transistor**

## Absolute Maximum Ratings Ta=25°C unless otherwise noted

| Symbol           | Parameter                   | Ratings   | Units |
|------------------|-----------------------------|-----------|-------|
| $V_{CBO}$        | Collector-Base Voltage      | -30       | V     |
| $V_{CEO}$        | Collector-Emitter Voltage   | -25       | V     |
| V <sub>EBO</sub> | Emitter-Base Voltage        | -5        | V     |
| I <sub>C</sub>   | Collector Current           | -1.0      | Α     |
| P <sub>C</sub>   | Collector Power Dissipation | 800       | mW    |
| TJ               | Junction Temperature        | 150       | °C    |
| T <sub>STG</sub> | Storage Temperature         | -55 ~ 150 | °C    |

## **Electrical Characteristics** $T_a$ =25°C unless otherwise noted

| Symbol                | Parameter                            | Test Condition                                 | Min. | Тур. | Max. | Units |
|-----------------------|--------------------------------------|--|------|------|------|-------|
| BV <sub>CBO</sub>     | Collector-Base Breakdown Voltage     | $I_C = -100 \mu A, I_E = 0$                    | -30  |      |      | V     |
| BV <sub>CEO</sub>     | Collector-Emitter Breakdown Voltage  | I <sub>C</sub> = -10mA, I <sub>B</sub> =0      | -25  |      |      | V     |
| BV <sub>EBO</sub>     | Emitter-Base Breakdown Voltage       | $I_E = -100 \mu A, I_C = 0$                    | -5   |      |      | V     |
| I <sub>CBO</sub>      | Collector Cut-off Current            | V <sub>CB</sub> = -30V, I <sub>E</sub> =0      |      |      | -0.1 | μΑ    |
| h <sub>FE</sub>       | DC Current Gain                      | V <sub>CE</sub> = -1V, I <sub>C</sub> = -100mA | 70   |      | 400  |       |
| V <sub>CE</sub> (sat) | Collector-Emitter Saturation Voltage | I <sub>C</sub> = -1A, I <sub>B</sub> = -0.1A   |      |      | -0.5 | V     |
| V <sub>BE</sub> (sat) | Base-Emitter Saturation Voltage      | I <sub>C</sub> = -1A, I <sub>B</sub> = -0.1A   |      |      | -1.2 | V     |
| f <sub>T</sub>        | Current Gain Bandwidth Product       | $V_{CE}$ = -6V, $I_{C}$ = -10mA                |      | 110  |      | MHz   |
| C <sub>ob</sub>       | Output Capacitance                   | $V_{CB}$ = -6V, $I_{E}$ =0, f=1MHz             |      | 18   |      | pF    |

## **h**<sub>FE</sub> Classification

| Classification  | 0        | Y         | G         |
|-----------------|----------|-----------|-----------|
| h <sub>FE</sub> | 70 ~ 140 | 120 ~ 240 | 200 ~ 400 |

# **Typical Characteristics**

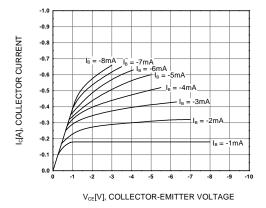


Figure 1. Static Characteristic

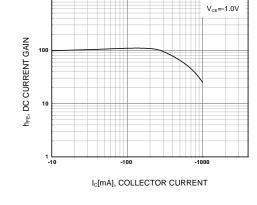


Figure 2. DC current Gain

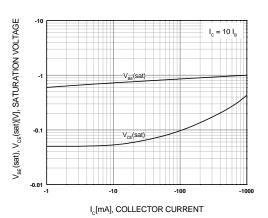


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

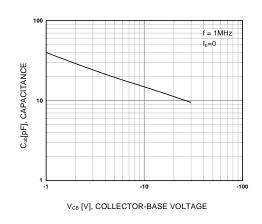


Figure 4. Collector Output Capacitance

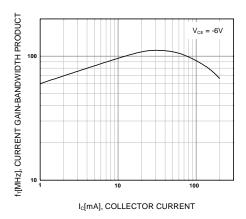


Figure 5. Current Gain Bandwidth Product

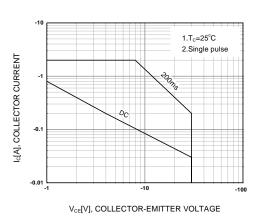
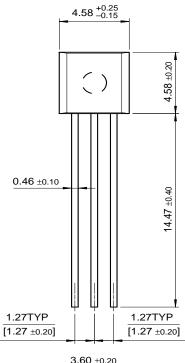


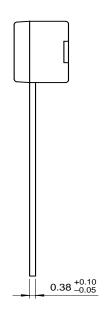
Figure 6. Safe Operating Area

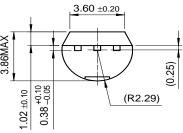
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TO-92



**Package Demensions** 





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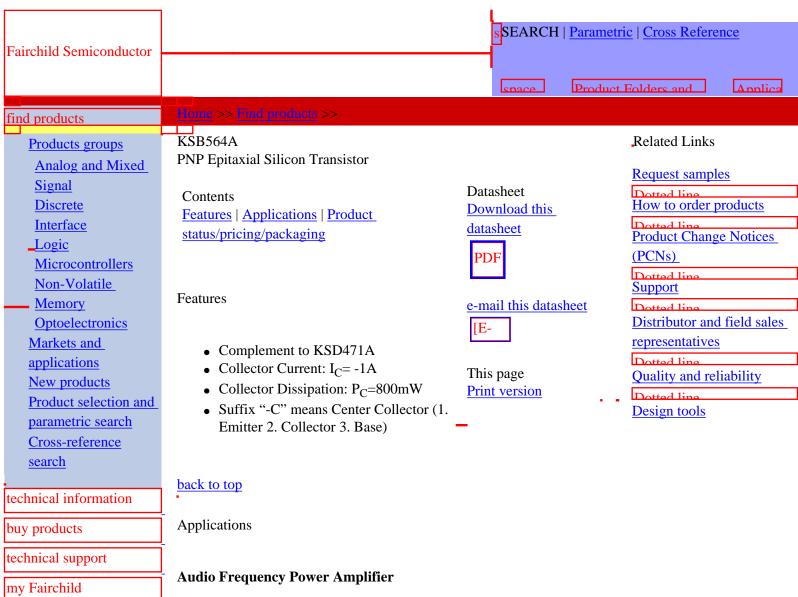
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back to top

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| Product     | Product status  | Pricing* | Package type | Leads | Packing method |
|-------------|-----------------|----------|--------------|-------|----------------|
| KSB564ACOBU | Full Production | \$0.06   | <u>TO-92</u> | 3     | BULK           |
| KSB564ACGBU | Full Production | \$0.06   | <u>TO-92</u> | 3     | BULK           |
| KSB564ACOTA | Full Production | \$0.06   | <u>TO-92</u> | 3     | TAPE REEL      |
| KSB564AOTA  | Full Production | \$0.06   | <u>TO-92</u> | 3     | TAPE REEL      |
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| KSB564AGTA  | Full Production | \$0.06   | <u>TO-92</u> | 3     | TAPE REEL      |
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Product Folder - Fairchild P/N KSB564A - PNP Epitaxial Silicon Transistor

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|------------|-----------------|--------|--------------|---|------|
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back to top

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